

IMAGE BASED VOLUMETRIC MEASURING DEVICE

ABSTRACT OF THE DISCLOSURE

5 A measuring device for calculating sample volumes and changes in
sample volumes is disclosed. The device includes a rotatable platform upon
which the sample is placed and rotated in increments with an image of the
sample being recorded at each rotational position to which the sample is
rotated. The recorded images are digitized and outlined such that the outline
can be divided into a plurality of parallel slices. The volume of each slice is
calculated by calculating the volume of each portion of the slice represented
by each image. The portions are then summed to provide the volume of each
slice with the volume of each slice then being summed to provide the volume
of the total sample. The device further includes a display apparatus to enable
an operator to not only view before and after calculated volumes, but to be
provided with a graphical display of the shape of the sample both before and
after an event which changes the volume of the sample.

10

15